

Dkt. No.: OP-092000358

AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A structure for expanding thermal conduction performance of a heat sink, comprising:

a bottom plate, having a bottom receiving chamber recessed from a top surface thereof;

a top plate, having a top receiving chamber recessed from a bottom surface thereof, wherein the top and bottom receiving chambers are aligned with each other, and the top plate and the bottom plate are covered by each other to form a planar shell, wherein the top and bottom receiving chambers are filled with work fluid;

a hollow filling tube embedded in a sidewall of the planar shell, the hollow filling tube being in fluid communication with the top and bottom receiving chambers, the filling tube has one sealed end distal to the planar shell;

a wick structure attached to the top and bottom plates within the top and bottom receiving chambers; [[and]]

~~at least one hollow thermal expansion conductor, wherein a tubular heat pipe with one end of the thermal expansion conductor is inserted into the planar shell, and the other end thereof extends extending outside of the planar shell, such that the thermal expansion conductor is in fluid communication with the top and bottom receiving chambers; and~~

a plurality of supporting columns extending from the bottom surface of the top plate to the top surface of the bottom plate to enhance the strength of the planar

RESPONSE TO OFFICE ACTION

10/779,699

- 2 -

Dkt. No.: OP-092000358

shell.

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Currently amended) The structure as claimed in Claim [[5]]1, further comprising a plurality of fins through which the tubular heat pipe penetrate through.

7. (Original) The structure as claimed in Claim 1, wherein a proximal end of the thermal expansion conductor is embedded in the planar shell between the top and bottom plates, and the other end thereof extends outside of the planar shell.

8. (Cancelled)

9. (Cancelled)

10. (New) A structure for expanding thermal conduction performance of a heat sink, comprising:

a bottom plate, having a bottom receiving chamber recessed from a top surface thereof;

a top plate, having a top receiving chamber recessed from a bottom surface thereof, wherein the top and bottom receiving chambers are aligned with each other, and the top plate and the bottom plate are covered by each other to form a planar shell, wherein the top and bottom receiving chambers are filled with work fluid;

a hollow filling tube embedded in a sidewall of the planar shell, the hollow

RESPONSE TO OFFICE ACTION

10/779,699

- 3 -

Dkt. No.: OP-092000358

filling tube being in fluid communication with the top and bottom receiving chambers, the filling tube has one sealed end distal to the planar shell;

a wick structure attached to the top and bottom plates within the top and bottom receiving chambers; and

a hollow columnar heat pipe with one end embedded in the top plate and the other end extending outside of the planar shell, such that the columnar heat pipe is in fluid communication with the top and bottom receiving chambers.

11. (New) A structure for expanding thermal conduction performance of a heat sink, comprising:

a bottom plate, having a bottom receiving chamber recessed from a top surface thereof;

a top plate, having a top receiving chamber recessed from a bottom surface thereof, wherein the top and bottom receiving chambers are aligned with each other, and the top plate and the bottom plate are covered by each other to form a planar shell, wherein the top and bottom receiving chambers are filled with work fluid;

a hollow filling tube embedded in a sidewall of the planar shell, the hollow filling tube being in fluid communication with the top and bottom receiving chambers, the filling tube has one sealed end distal to the planar shell;

a wick structure attached to the top and bottom plates within the top and bottom receiving chambers; and

a hollow heat plate with one end embedded in the top plate and the other end

RESPONSE TO OFFICE ACTION

10/779,699

- 4 -

Dkt. No.: OP-092000358

extending outside of the planar shell, such that the heat plate is in fluid communication with the top and bottom receiving chambers.

RESPONSE TO OFFICE ACTION

- 5 -

10/779,699